

## New Records of Pteridophytes from Bolivia

ALAN R. SMITH

University Herbarium, 1001 Valley Life Sciences Bldg., University of California,  
Berkeley, CA 94720

MICHAEL KESSLER

Albrecht-von-Haller-Institut für Pflanzenwissenschaften, Abt. für Systematische Botanik,  
Untere Karspüle 2, 37073 Göttingen, Germany

JASIVIA GONZALES

Herbario Nacional de Bolivia, Casilla 10077, La Paz, Bolivia

**ABSTRACT.**—Based mainly on collections made in the last few years, we document 145 species and one additional variety of pteridophytes for the first time in Bolivia. Full specimen citations, previously known distributions, and, where appropriate, taxonomic notes are given for all taxa. The remarkable Bolivian pteridophyte flora previously has been among the most poorly known in the world, and it has been thought to be less diverse than the floras of other Andean countries. Recent collections, of both described and undescribed species, suggest that Bolivia rivals other Andean floras in richness and permit more accurate taxonomic and phytogeographic comparisons with fern floras from adjacent areas.

**RESUMEN.**—Basándonos sobre todo en colectas realizadas en los últimos pocos años, documentamos 145 especies y una variedad adicional de pteridofitas por primera vez para Bolivia. Para todos los taxones se proporcionan citaciones completas de especímenes, distribución previamente conocida y, donde sea apropiado, notas taxonómicas. La flora de pteridofitas de Bolivia era hasta poco una de las menos conocidas del mundo y era considerada menos diversa que aquella de otros países andinos. Colecciones recientes, incluyendo especies descritas y no descritas, sugieren que Bolivia equivale a otros países andinos en su riqueza de helechos y permiten comparaciones taxonómicas y fitogeográficas más precisas con floras de áreas aledañas.

Bolivia is still poorly known botanically, and the pteridophytes are no exception. There is no modern checklist for the country, and keys are still only a distant hope. The only list for the country was compiled by Foster (1958), but that list lacks many recent nomenclatural changes and needs critical review for taxonomic accuracy. Other literature dealing with pteridophytes is scattered in monographs of specific genera or provides a hint of the richness for relatively small areas (e.g., Adolfo Maria [1966] for Valle de Cochabamba) or for specific itineraries (see, e.g., Christensen in Asplund, 1926).

A rough idea of the richness of the Bolivian pteridophyte flora can be gleaned from other neotropical floras, where incidental mention is made of Bolivia in the range of species of ferns that also occur in Bolivia. The most useful and current of these are the *Pteridophyta of Peru* (Tryon and Stolze, 1989a, 1989b, 1991, 1992, 1993, 1994), the *Flora of Ecuador* (complete only for a few families; see, e.g., Smith, 1983; Stolze et al., 1994), *Flora of the Venezuelan Guayana* (Smith et al. in Steyermark et al., 1995), and *Flora Me-*

*soamericana* (Davidse et al., ed., 1995). But even with these resources, the task of identifying and cataloging the Bolivian flora is daunting.

The majority of specimens cited in this paper were collected by Kessler, Gonzales, and coworkers in the course of a project to monitor the geographical distribution of plant and bird species richness and endemism in Bolivian montane forests. Pteridophytes, along with some other plant groups such as Acanthaceae, aroids, bromeliads, cacti, Melastomataceae, and palms, were selected as botanical indicator groups. In the course of three years of field work (1995–1997) Kessler et al. visited over 50 study sites ranging from tropical lowland to timberline forests and collected ca. 5,000 pteridophyte specimens (Fig. 1). During the identification work, we found additional specimens by other collectors representing new country records. The principal herbaria in which these collections have been deposited are AAU, LPB, NY, UC, and USZ.

For purposes of this compilation, we cite only taxa that have never before been listed as occurring in Bolivia; we do not include taxa that have been cited in other floras (e.g., Davidse et al., 1995; Tryon and Stolze 1989a, 1989b, 1991, 1992, 1993) as occurring in Bolivia, even if no specimens from Bolivia were cited in those works. To include such taxa would probably more than double the number of taxa and the length of this paper. Species identified as “vel aff.” are either that species or a closely related, possibly undescribed new one. For identifications with a query (?) there is some doubt about the applicability of the name given, but in the absence of a modern revision of the group it is not possible to be certain of the name at this time. In a few cases, where more than ten specimens have been found of a species, only a selection reflecting the distribution of the records is reported. Department names for Bolivia are indicated in boldface.

Many of the new country records for Bolivia reported here are expected as the species were already known from adjacent regions, mainly Peru, Amazonian Brazil, and northwestern Argentina. However, some taxa show remarkable disjunctions with respect to their previously known ranges. Twenty-four species were known previously only from northern South America (Ecuador, Colombia, Venezuela, Guianas, adjacent Brazil) and Central America. One species (*Polystichum turrialbae*) is reported for the first time for South America, being so far known only from Mesoamerica. Another seven taxa that were previously reported from only the Atlantic forest regions of southeastern Brazil and adjacent parts of Paraguay, Argentina, and Uruguay are now known to have isolated populations in the Bolivian Andes. This distributional pattern is not uncommon among ferns, higher plants (e.g., epiphytic cacti; see Ibisch [1996]), and birds (e.g., *Phibalura flavirostris* (Vieillot)) and may relate to the mountain connection between the Bolivian Andes and the mountains of southeastern Brazil, which was interrupted in the Plio-Pleistocene by the subsidence of the Chaco, Beni llanos and Pantanal regions (Hanagarth, 1993; da Silva, 1995). Perhaps most surprising are the records of two species (*Blechnum blechnoides*, *Hypolepis poeppigii*) otherwise known from austral Chile and Argentina. Interestingly, both species were found in the same general area where *Arachnitis uniflora* Phil. (Corsiaceae) has recently been found for the

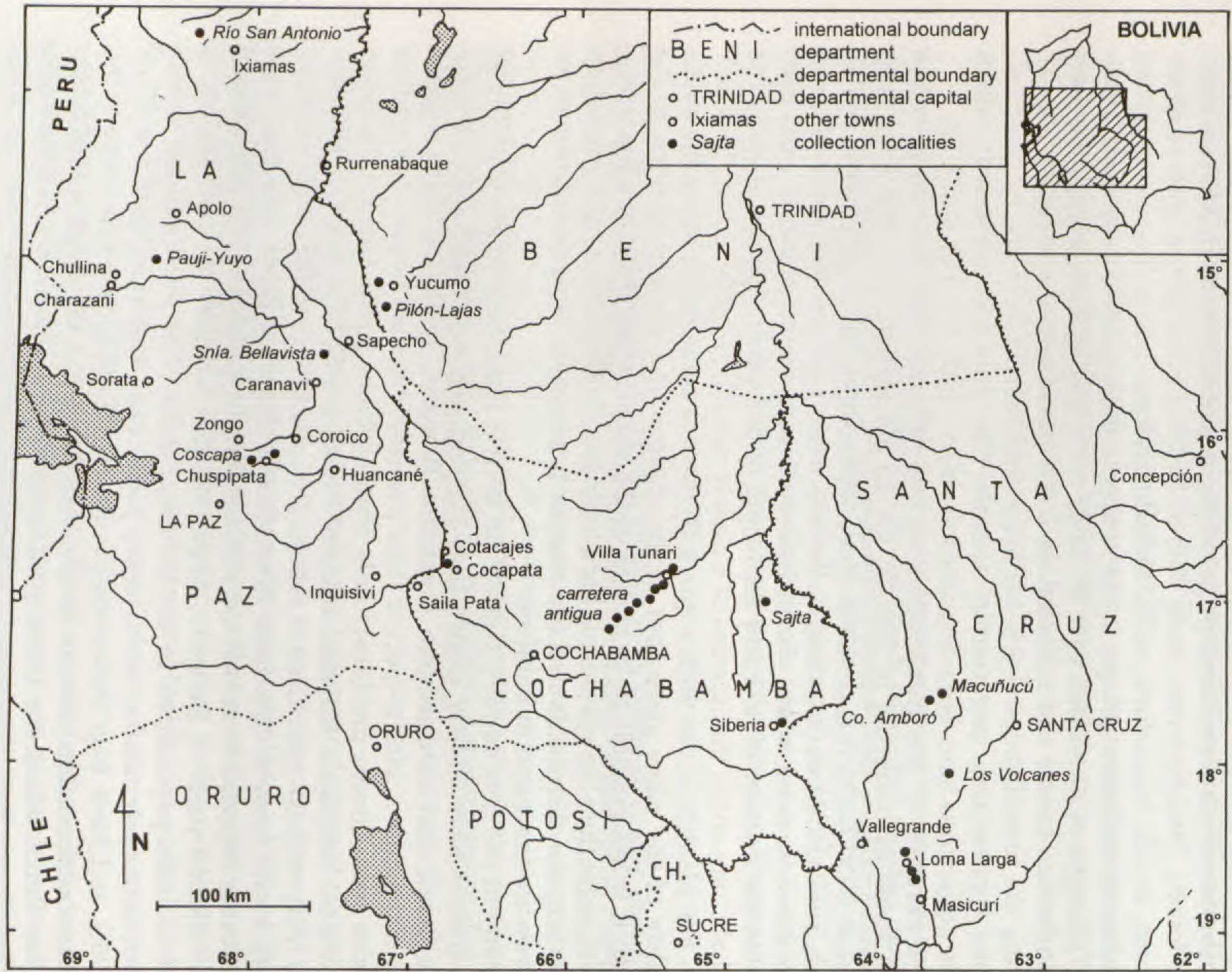


FIG. 1. Location of cities and settlements (open circles, names in Roman type) and collecting localities (filled circles, names in italics) in central Bolivia mentioned in the text. CH = Chuquisaca.

first time away from its usual distribution in southern Chile and Argentina (Ibisch et al., 1996). The biogeographical significance of these disjunct populations remains to be explained.

Although the new country records reported here significantly add to our knowledge of Bolivian pteridophytes, they also show how little is still known about this botanically neglected country. Recent in-depth studies of Bolivian orchids (Ibisch, 1998) and bromeliads (Krömer et al., in press) have also revealed a large number of new country records and undescribed taxa, and have placed Bolivia among the ten most species-rich countries worldwide for these groups (Ibisch, 1998). Among pteridophytes, we are aware of a large number of undescribed species already represented in herbarium collections, and despite greatly intensified collecting activities in the last few years, we expect that a significant number of taxa remain to be found. The number of undescribed pteridophyte species from Bolivia probably approaches the number of new records listed below.

26607567 *ADIANTUM AMAZONICUM* A. R. SM.—**La Paz**. Prov. Caranavi, Comunidad Cultural Unidos, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1250 m, *Kessler 11380* (LPB, UC). Previously known from Venezuela and Amazonian Brazil (Smith in Steyermark et al., 1995).

26613651 *ADIANTUM CAJENNENSE* WILLD. EX KLOTZSCH—**Cochabamba**. Prov. José Carrasco Torrico, Valle del Sajta, 17°08'S, 64°50'W, 220 m, *Kessler 8826* (LPB, UC). Previously known from Colombia, Venezuela, Guianas, Trinidad, Ecuador, Peru, and Amazonian Brazil (Lellinger, 1991; Smith in Steyermark et al., 1995). This species was regarded as a synonym of the polymorphic *A. tetraphyllum* Humb. & Bonpl. ex Willd. by Tryon and Stolze (1989b), but it seems clearly distinct in Bolivia and elsewhere in South America (Lellinger, 1991).

26606818 *ADIANTUM DEFLECTENS* MART.—**Santa Cruz**. Prov. Ñuflo de Chaves, San Ramon, Estancia Castado, línea 105, 16°38'S, 62°27'W, 370 m, *Arroyo P. 10* (NY); Prov. Chiquitos, Cerro Mutún, 7 km NE de la pista, 25 km al S de Puerto Suárez, 18°11.3'S, 57°52.7'W, 750 m, *Vargas 3326* (NY). Previously known from Mexico, Guatemala to Panama, Colombia, Venezuela, French Guiana, Ecuador, Peru, Brazil, and Paraguay (Tryon and Stolze, 1989; Zimmer in Davidse et al., 1995).

26606783 *ADIANTUM HUMILE* KUNZE?—**Beni**. Prov. Gral. Ballivián, 16 km por el camino maderero, 12 km de Yucumo—Rurrenabaque, 15°05'S, 67°07'W, 800 m, *Kessler 10930* (LPB, UC); Prov. Vaca Diez, 13 km E of Riberalta on road to Guayaramerín, then 3 km N on side road, 10°58'S, 65°58'W, 230 m, *Solomon 7818* (LPB, MO, UC). **Pando**. Prov. Madre de Dios, Puerto Candelaria, Río Madre de Dios, 11°02'S, 66°15'W, *Moraes 215* (LPB, UC). Previously known from Belize, Panama, Colombia, Venezuela, Guianas, Trinidad, Ecuador, and Peru (Jermy in Davidse et al., 1995).

26603272 *ADIANTUM LUNULATUM* BURM. F.?—**Beni**. Prov. Gral. Ballivián, 16 km por el camino maderero, 12 km de Yucumo a Rurrenabaque, 15°05'S, 67°07'W, 700 m, *Kessler 10896* (UC). Previously known from Cuba, Mexico, Guatemala to Panama, Colombia, Venezuela, Old World tropics (Zimmer in Davidse et al., 1995).

26606812 *ADIANTUM RUIZIANUM* KLOTZSCH—**Cochabamba**. Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba—Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7210* (LPB, UC). Previously known only from Peru (Tryon and Stolze, 1989b).

*ADIANTUM SUBVOLUBILE* METT. EX KUHN, VEL AFF.—**Cochabamba**. Prov. Ayopaya, 10 km Cocapata—Cotacajes, 16°38'S, 66°41'W, 3000 m, *Kessler 9372* (LPB, UC); same general locality, 2900 m, *Kessler 9471* (LPB, UC); same general locality, 2700 m, *Kessler 9483* (LPB, UC); same general locality, 3100 m, *Kessler 9540* (LPB, UC); Prov. Ayopaya, 4 km S de Saila Pata, 16°54'S, 66°56'W, 3050 m, *Kessler 12373* (LPB, UC). Previously known from Ecuador and Peru (Tryon and Stolze, 1989b).

- 26602919 *ADIANTUM VILLOSISSIMUM* METT. EX KUHN—**Beni**. Prov. Gral. Ballivián, 20 km por el camino maderero, 12 km de Yucumo–Rurrenabaque, 15°08'S, 67°07'W, 950 m, *Kessler 11066* (LPB, UC); Prov. Ballivian, 25 km from Yucumo on Yucumo–Quiquibey road, in the Pilon Lajas, 15°17'S, 67°04'W, 950 m, *Fay & Fay 2779* (MO, UC). Previously known from Colombia and Peru, and now also from Ecuador (*Fay & Fay 3981*, MO, QCNE, UC; *Fay & Fay 4463*, MO, UC; *Mexia 7217*, UC). Tryon and Stolze (1989b) referred the Peruvian specimens that Tryon (1964) had previously regarded as this species to *A. tetraphyllum* Humb. & Bonpl. ex Willd., but the two species seem amply distinct to us. The type is from Colombia (Turbo), not Panama, as stated by Tryon (1964).
- ALSOPHILA SETOSA* KAULF., VEL AFF.—**La Paz**. Prov. Caranavi, Serranía Bellavista, 41 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1450 m, *Kessler 11451* (LPB, UC). Previously known from s. Brazil, ne. Argentina, and Paraguay (Gastony, 1973; Conant, 1983). This species is remarkable for its skeletonized aplebiae at the base of the petiole.
- 26619803 *ANEMIA ELEGANS* (GARDNER) C. PRESL—**Santa Cruz**. Prov. Velasco, Parque Nacional Noel Kempff M., Campamento Las Gamas, frente al Farellon, 14°49'24"S, 60°23'20"W, 900 m, *Arroyo et al. 192* (MO, UC, USZ). Previously known only from Brazil (Mickel, 1962).
- 26606111 *ANEMIA VILLOSA* HUMB. & BONPL. EX WILLD.?—**Santa Cruz**. Prov. Valle Grande, 5 km de Loma Larga a Masicurí, 18°43'S, 63°54'W, 2150 m, *Kessler 6318* (LPB, UC). Previously known from Colombia, Venezuela, Guianas, Ecuador, Peru, and Brazil (Mickel, 1962; Smith in Steyermark et al., 1995). Specimens from Bolivia determined as this in various herbaria are mostly other species, particularly *A. flexuosa* (Sav.) Sw. and *A. tomentosa* (Sav.) Sw.
- 26609927 *ARACHNIODES OCHROPTEROIDES* (BAKER) LELLINGER—**La Paz**. Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°03'S, 68°29'W, 1350 m, *Kessler 10116* (LPB, UC). Previously known from Jamaica, Panama, Colombia, Venezuela, Guyana, Surinam, Ecuador, and Peru (Tryon and Stolze, 1991; Smith in Steyermark et al., 1995).
- 26607013 *ASPENIUM DELITESCENS* (MAXON) L. D. GÓMEZ—**Beni**. Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo–Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10769* (LPB, UC); Prov. Ballivián, Río Colorado, Colegio Técnico Agropecuario de Río Colorado, 15°00'S, 67°10'W, 235 m, *Fay & Fay 2078* (LPB, MO, UC). **La Paz**. Prov. Sud Yungas, Alto Beni, Sapecho, 15°32'S, 67°21'W, 650 m, *Acebey 76* (LPB, UC); Prov. Sud Yungas, Alto Beni, cerca de Sapecho, Colonia San Pedro, 470 m, *Seidel 8253* (LPB, UC). Previously known from Cuba, s. Mexico, Guatemala to Panama, Colombia, Venezuela, Ecuador, Peru, and Amazonian Brazil (Murakami and Moran, 1993).
- 26601875 *ASPENIUM EXTENSUM* FÉE, VEL AFF.—**Cochabamba**. Prov. Ayopaya, 2 km de Casay Vinto–Choro, 16°52'S, 66°38'W, 3350 m, *Kessler 9239* (LPB, UC). Previously known from Colombia and Peru (Tryon and Stolze, 1993). Notable for the short papillate hairs along the rachises adaxially.
- 26601080 *ASPENIUM INAEQUILATERALE* WILLD.—**Chuquisaca**. Prov. Sud Cinti, entre El Palmar y Rinconada del Bufete, 20°51'03"S, 64°19'10"W, 1500–1600 m, *Arroyo et al. 869* (USZ, UC). **La Paz**. Prov. J. Bautista Saavedra M., 18 km de Charazani hacia Apolo, 15°10'S, 68°45'W, 2150 m, *Kessler 10558* (LPB, UC). **Santa Cruz**. Prov. Valle Grande, 11 km de Loma Larga a Masicurí, 18°47'S, 63°52'W, 1400 m, *Kessler 6083* (LPB, UC); Prov. Valle Grande, 8 km de Loma Larga a Masicurí, 18°47'S, 63°52'W, 1550 m, *Kessler 6136* (LPB, UC); Prov. Valle Grande, 1 km de Loma Larga a Masicurí, 18°46'S, 63°54'W, 1900 m, *Kessler 6176* (LPB, UC); Prov. Valle Grande, 4 km de Loma Larga a Masicurí, 18°47'S, 63°53'W, 1750 m, *Kessler 6283* (LPB, UC); Prov. Valle Grande, 5 km de Loma Larga a Valle Grande, 18°43'S, 63°54'W, 2100 m, *Kessler 6378* (LPB, UC); Prov. Florida, Refugio Los Volcanes, 3 km al NE de Bermejo, 18°06'S, 63°36'W, 1050 m, *Kessler 12211* (LPB, UC). Previously known from s. Brazil, Africa, Madagascar, Mascarenes, s. India, and Sri Lanka (Sehnem, 1968). This species has often been known as *A. brachyotus* Kunze, but plants from Africa and South America appear identical (Moran and Smith, unpublished data).
- 26602519 *ASPENIUM PALMERI* MAXON—**Cochabamba**. Prov. Ayopaya, 20 km Cocapata–Cotacajes, 16°46'S,

66°44'W, 2000 m, *Kessler 9569* (LPB, UC). **La Paz.** Prov. Inquisivi, 6 km de Inquisivi a Sita, 16°53'S, 67°08'W, 2500 m, *Kessler 5559* (LPB, UC). Previously known from Arizona, Mexico, Belize, Guatemala, Honduras, Colombia, w. Venezuela, Ecuador, and nw. Argentina (de la Sota, 1977; Stolze et al., 1994; Adams in Davidse et al., 1995). This species is flagelliform and gemmiferous at the apex, and has sometimes been included within the non-flagellate *A. heterochroum* Kunze (e.g., by Stolze et al., 1994); we believe the two are distinct species.

26609181 *ASPLENIUM PEARCEI* BAKER—**La Paz.** Prov. Abel Iturralde, Río San Antonio, 46 km de Ixiamas a Alto Madidi, 13°38'S, 68°26'W, 300 m, *Kessler 11119* (LPB, UC). Previously known from Venezuela, Guianas, Ecuador, Peru, and Amazonian Brazil (Tryon and Stolze, 1993; Smith in Steyermark, 1995).

26616160 *ASPLENIUM PURPURASCENS* METT. EX KUHN, VEL AFF.—**Beni.** Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo–Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10819, 10844* (LPB, UC). **La Paz.** Prov. Iturralde, San Buena Ventura, 14°15'S, 67°40'W, 1400 ft., *Williams 1080* (NY). **Santa Cruz.** Prov. Ichilo, Parque Nacional Amboro, steep slopes above and 1 km S of Río Saguayo, 17°41'S, 63°44'W, 750 m, *Nee 36020* (LPB, NY). Previously known only from w. Ecuador (Murakami and Moran, 1993). All four Bolivian specimens differ from those in Ecuador in having the proximal pinnae with segments more prolonged along the basiscopic side and thinner blades.

26615000 *ASPLENIUM RADDIANUM* GAUDICH.—**Cochabamba.** Prov. José Carrasco Torrico, 107 km antigua carretera Cochabamba–Villa Tunari, 17°10'S, 65°38'W, 3050 m, *Kessler 6669* (LPB, UC); Prov. José Carrasco Torrico, 141 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°33'W, 1400 m, *Kessler 7727* (LPB, UC); Prov. Ayopaya, Pujyani, 10 km Cocapata–Cotacajes, 16°38'S, 66°41'W, 2900 m, *Kessler 9307, 9316* (LPB, UC); same general locality, 2850 m, *Kessler 9441* (LPB); same general locality, 2700 m, *Kessler 9507* (LPB, UC). **La Paz.** Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°02'S, 68°29'W, 1450 m, *Kessler 9807* (LPB, UC); Prov. Caranavi, Comunidad Cultural Unidos, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1450 m, *Kessler 11687, 11688* (LPB, UC). **Santa Cruz.** Prov. Valle Grande, 6 km de Loma Larga a Valle Grande, 18°43'S, 63°54'W, 2150 m, *Kessler 6330* (LPB, UC). Previously known from Colombia, Venezuela, Peru, and s. Brazil (Tryon and Stolze, 1993).

26605488 *BLECHNUM BLECHNOIDES* KEYSERL.—**Santa Cruz.** Prov. Valle Grande, 13 km de Loma Larga a Valle Grande, 18°39'S, 63°55'W, 2300 m, *Kessler 6474* (LPB, UC). Previously known only from Chile (Rodríguez in Marticorena and Rodríguez, 1995).

50055464 *BLECHNUM LAEVIGATUM* CAV.—**Santa Cruz.** Prov. Valle Grande, 1 km de Loma Larga a Masicurí, 18°46'S, 63°54'W, 1900 m, *Kessler 6199* (LPB, UC). Previously known from se. Brazil, n. Argentina, and Uruguay (Murillo, 1968).

50001876 *BLECHNUM OBTUSIFOLIUM* ETTINGSH.—**Santa Cruz.** Prov. Valle Grande, 2 km de Loma Larga a Valle Grande, 18°45'S, 63°54'W, 2050 m, *Kessler 6411* (LPB, UC). Previously known from Peru, se. Brazil, nw. Argentina (Tryon and Stolze, 1993).

26602714 *BOLBITIS NICOTIANIFOLIA* (SW.) ALSTON—**Beni.** Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo–Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10698* (LPB, UC). **Cochabamba.** Prov. Chapare, Cavernas del Repechón, Parque Nacional Carrasco, 17°02'S, 65°26'W, 550 m, *Kessler 8319* (LPB, UC). **La Paz.** Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°02'S, 68°29'W, 1450 m, *Kessler 9896* (LPB, UC); Prov. Abel Iturralde, Río San Antonio, 46 km de Ixiamas a Alto Madidi, 13°38'S, 68°26'W, 300 m, *Kessler 11167* (LPB, UC). Previously known from the Antilles, Guatemala to Panama, Colombia, Venezuela, Guianas, Ecuador, and Peru (Hennipman, 1977; Tryon and Stolze, 1991; Hennipman and Moran in Davidse et al., 1995).

26615123 *CAMPYLONEURUM SOLUTUM* (KLOTZSCH) FÉE—**Cochabamba.** Prov. José Carrasco Torrico, 94 km antigua carretera Cochabamba–Villa Tunari, 17°12'S, 65°41'W, 3500 m, *Kessler 6783* (LPB, UC). **La Paz.** Prov. Inquisivi, "Río Jancha Kaihua," opposite side of headwaters of Río Chekha, 1 km NW of

Laguna Huara Huarani, *Lewis 39967* (LPB, MO, UC). Previously known from Colombia and Ecuador (León in Tryon and Stolze, 1993).

26613682 *CASSEBEERA PINNATA* KAULF.—**Beni**. Itenez, Serranía San Simon, 14°25'S, 62°03'W, 205 m, *Quevedo et al. 986* (MO, UC, USZ). **Santa Cruz**. Prov. Velasco, Parque Nacional Noel Kempff M., 14°49'S, 60°23'W, 900 m, *Killeen et al. 4785* (MO, UC, USZ). Previously known from s. Venezuela and Brazil (Tryon, 1942; Smith in Steyermark et al., 1995).

26611063 *CASSEBEERA TRIPHYLLA* (LAM.) KAULF.—**Chuquisaca**. Prov. Hernando Siles, 42 km de Monteagudo a Padilla, 19°38'S, 64°03'W, 1200 m, *Kessler 4916* (AAU, LPB). Previously known from se. Brazil, Uruguay, Paraguay, and n. Argentina (Tryon, 1942; de la Sota, 1977). Usually treated as *Doryopteris triphylla* (Lam.) H. Christ, but belonging better in *Cassebeera*, and allied to *C. pinnata*.

26610922 *CHEILANTHES MICROPTERIS* SW.—**Cochabamba**. Prov. Cercado de Cochabamba, entre los peñascos de lo Cerros de San Pedro y S. Miguel, 2575 m, *Steinbach 6* (UC); Prov. Esteban Arce, 1 km de La Viña—Anzaldo, 17°57'S, 65°52'W, 2100 m, *Kessler 4586* (AAU, LPB); Prov. Narciso Campero Leyes, 10 km al NW de Novillero a Santiago, 18°19'S, 65°15'W, 2400 m, *Kessler 4662* (AAU, LPB). Previously known from Brazil, Uruguay, and nw. Argentina (de la Sota, 1977).

26615549 *CHEILANTHES TWEEDIANA* HOOK.—**Chuquisaca**. Prov. Yamparaez, 5 km de Icla a Uyuni, 19°24'S, 64°48'W, 2450m, *Kessler 4744* (AAU, LPB); Prov. Jaime Zudañez, Presto, 18°55'S, 64°57'W, 1500 m, *Moraes & Vargas 1827* (LPB, UC). **Cochabamba**. Cerro San Pedro, 2400 m, *Steinbach 8759* (UC); Prov. Cercado de Cochabamba, Colina de San Pedro, 2575 m, *Steinbach 8* (UC). **Dpto. unknown**. Bolivian Plateau, *Bang 1057* (UC). Previously known from Argentina and Paraguay.

26606763 *CNEMIDARIA ULEANA* (SAMP.) R.M. TRYON VAR. *ULEANA*—**Cochabamba**. Prov. José Carrasco Torrico, 136 km antigua carretera Cochabamba—Villa Tunari, 17°06'S, 65°35'W, 1900 m, *Kessler 7289* (LPB, UC); Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba—Villa Tunari, 17°06'S, 65°35'W, 1600 m, *Kessler 7413* (LPB, UC). Previously known from Peru and s. Brazil (Stolze, 1974; Tryon and Stolze, 1989a), and also, now, Ecuador (*Stolze & Stolze 1708*, F, UC); var. *abitaguensis* (Domin) Stolze occurs in Colombia and Ecuador (Stolze, 1974).

26607119 *CTENITIS NIGROVENIA* (H. CHRIST) COPEL.—**Santa Cruz**. Prov. Valle Grande, 12 km de Loma Larga a Masicurí, 18°48'S, 63°49'W, 1000 m, *Kessler 6056* (LPB, UC); Prov. Florida, Refugio Los Volcanes, 3 km al NE de Bermejo, 18°06'S, 63°36'W, 1050 m, *Kessler 12268* (LPB, UC). Previously known from s. Mexico, Guatemala to Panama, Colombia, Venezuela, Trinidad, and Peru (Tryon and Stolze, 1991; Moran in Davidse et al., 1995).

30163793 *CTENITIS PEDICELLATA* (H. CHRIST) COPEL., VEL AFF.—**Santa Cruz**. Prov. Valle Grande, 12 km de Loma Larga a Masicurí, 18°47'S, 63°51'W, 1300 m, *Kessler 6071* (LPB, UC). Previously known from se. Brazil (Christensen, 1913; Sehnem, 1979).

26607125 *CTENITIS REFULGENS* (METT.) VARESCHI—**La Paz**. Prov. Sud Yungas, Alto Beni, Sapecho, Colonia Tarapaca, 15°32'S, 67°21'W, 610 m, *Krömer et al. 50* (LPB, UC). Previously known from s. Mexico, Guatemala, Panama, Colombia, Venezuela, Guianas, Ecuador, Peru, and Amazonian Brazil (Tryon and Stolze, 1991; Moran in Davidse et al., 1995).

26602761 *CTENITIS SLOANEI* (SPRENG.) C.V. MORTON—**Beni**. Prov. Moxos, Chimanes forest, 15°10'S, 66°37'W, 260 m, *Fay & Fay 2810* (MO, UC); Prov. Yacuma, Campamento Campo Monos, bajando por el Río Curiraba, 14°38'S, 66°04'W, 195 m, *Acebey 42* (LPB, UC). Previously known from Florida, Antilles, s. Mexico to Panama, Colombia, Venezuela, Ecuador, and Peru (Tryon and Stolze, 1991; Moran in Davidse et al., 1995).

26606707 *CYATHEA MICRODONTA* (DESV.) DOMIN—**Beni**. Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo—Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10733* (LPB, UC). **Cochabamba**. Prov. José Carrasco Torrico, Valle del Sajta, 17°08'S, 64°50'W, 220 m, *Kessler 8823, 8871* (LPB, UC); Prov. José Carrasco Torrico, Proyecto Valle del Sacta, 241 km W of Santa Cruz,

17°12'S, 64°43'W, 290 m, *Fay & Fay 2283* (LPB, MO, UC). Previously known from the Greater Antilles, s. Mexico, Guatemala to Panama, Colombia, Venezuela, Guianas, Trinidad, Ecuador, Peru, and Brazil (Barrington, 1978; Tryon and Stolze 1989a).

26602144 *DANAEA NODOSA* (L.) SM.—**Beni**. Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo–Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10737* (LPB, UC); Prov. Gral. Ballivián, 16 km por el camino maderero, 12 km de Yucumo a Rurrenabaque, 15°05'S, 67°07'W, 700 m, *Kessler 10901* (LPB, UC). **Cochabamba**. Prov. Chapare, Cavernas del Repechón, Parque Nacional Carrasco, 17°02'S, 65°26'W, 550 m, *Kessler 8257* (LPB, UC). **La Paz**. Prov. Abel Iturralde, Río San Antonio, 46 km de Ixiamas a Alto Madidi, 13°38'S, 68°26'W, 300 m, *Kessler 11148, 11225* (LPB, UC); Prov. Caranavi, Serranía de Bellavista, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1300 m, *Kessler 11238* (LPB, UC); Prov. Caranavi, Serranía de Bellavista, 46 km de Caranavi hacia Sapecho, 15°39'S, 67°28'W, 1200 m, *Kessler 11626* (LPB, UC); Prov. Sud Yungas, Alto Beni, Sapecho, Colonia Tarapaca, 15°32'S, 67°21'W, 610 m, *Krömer 45* (LPB, UC). Previously known from the Antilles, s. Mexico, Central America, Colombia, Venezuela, Trinidad, Guianas, Ecuador, Peru, and s. Brazil (Tryon and Stolze, 1989a; Camus and Pérez-García in Davidse et al., 1995).

26606294 *DENNSTAEDTIA SPRUCEI* T. MOORE—**Cochabamba**. Prov. José Carrasco Torrico, 117 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2350 m, *Kessler 7071* (LPB, UC); Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7194* (LPB, UC). Previously known from Costa Rica (*Hammel 19265*, MO), Ecuador, and Peru (Tryon and Stolze, 1989b).

26607806 *DIPLAZIUM DIPLAZIOIDES* (KLOTZSCH & H. KARST. EX KLOTZSCH) ALSTON—**Cochabamba**. Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°34'W, 1300 m, *Kessler 7561* (LPB, UC); Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°35'W, 1500 m, *Kessler 7764* (LPB, UC); Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°35'W, 1500 m, *Kessler 7802* (LPB, UC); Prov. Chapare, 1.5 km al SE de El Palmar en camino a Avispas, 17°04'S, 65°34'W, 910 m, *Kessler 8187* (LPB, UC). Previously known from Guatemala to Panama, Colombia, Venezuela, Trinidad, and Ecuador (Stolze et al., 1994; Adams in Davidse et al., 1995).

26602793 *DIPLAZIUM EXPANSUM* WILLD.—**Beni**. Prov. Ballivian, 25 km from Yucumo on Yucumo–Quiquibey road, in the Pilón Lajas, 15°17'S, 67°04'W, 950 m, *Fay & Fay 2755, 2784* (MO, UC). **Cochabamba**. Prov. Chapare, Incachaca, 2200 m, *Steinbach 8918* (UC); Prov. Chapare, 1 km de la Caverna Repechón, hacia Villa Tunari, 17°02'S, 65°27'W, 500 m, *Kessler 8370* (LPB, UC). **La Paz**. Prov. Caranavi, Serranía de Bellavista, 46 km de Caranavi hacia Sapecho, 15°39'S, 67°28'W, 1200 m, *Kessler 11619* (LPB, UC). **Santa Cruz**. Prov. Valle Grande, 12 km de Loma Larga a Masicuri, 18°47'S, 63°51'W, 1250 m, *Kessler 6030* (LPB, UC); Prov. Florida, Refugio Los Volcanes, 3 km al NE de Bermejo, 18°06'S, 63°36'W, 1050 m, *Kessler 12247* (LPB, UC). Previously known from s. Mexico to Costa Rica, Colombia, Venezuela, Guianas, Ecuador, Peru, and Brazil (Tryon and Stolze, 1991; Stolze et al., 1994; Adams in Davidse et al., 1995). That this relatively common and widespread species, represented in herbaria by old collections, has not heretofore been recorded from Bolivia is further evidence of the paucity of our knowledge of Bolivian ferns.

26602799 *DIPLAZIUM LONCHOPHYLLUM* KUNZE—**La Paz**. Prov. Caranavi, comunidad Cultural Unidos, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1450 m, *Kessler 11695* (LPB, UC). Previously known from s. Mexico, Guatemala to Panama, Colombia, and Ecuador (Stolze et al., 1994; Adams in Davidse et al., 1995).

26615026 *DIPLAZIUM MOCCENIANUM* (SODIRO) C. CHR., VEL AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 149 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°34'W, 1000 m, *Kessler 7980*, pt. (LPB, UC). Previously known from Colombia and Ecuador (Stolze et al., 1994), and also, now, Brazil (Minas Gerais, *Salino 2409*, BHCBC, UC).

26614581 *DORYOPTERIS COLLINA* (RADDI) J. SM.—**Santa Cruz**. Prov. Vallegrande, 18 km de Masicuri hacia Bo-



yuibe, 18°59'S, 63°44'W, 550 m, *Kessler 5262* (AAU, LPB); Prov. Ñuflo de Chávez, Lomerío, ca. 63 km S of Concepción to Las Trancas, then ca. 10 km N on access road, 16°30'S, 61°53.5'W, 500 m, *Abbott 16375* (UC, USZ). Previously known from Guyana, Surinam, Brazil, and Paraguay (Tryon, 1942; Kramer, 1978).

26612163

*ELAPHOGLOSSUM AMAZONICUM* ATEHORTUA EX MICKEL—**La Paz**. San José, 1600 ft, *Williams 1027* (NY). **Santa Cruz**. Prov. Ichilo, 4 km al SW del Campamento Macuñucú, 17°44'S, 63°35'W, *Kessler 8670* (LPB, UC). Cited only for Peru in the original description (Mickel in Tryon and Stolze, 1991), but at that time already known from Bolivia (*Williams 1027*) and Mato Grosso, Brazil (*Hatschbach 36206*, NY, UC) (J. Mickel, pers. comm.).

26617314

*ELAPHOGLOSSUM AMBIGUUM* (METT. EX H. CHRIST) ALSTON—**Cochabamba**. Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°35'W, 1500 m, *Kessler 7755* (LPB, UC); Prov. José Carrasco Torrico, 7 km de Siberia hacia Karahuasi, 17°47'S, 64°41'W, 2200 m, *Kessler 9085* (LPB, UC). **La Paz**. Prov. Caranavi, Serranía Bellavista, 41 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1450 m, *Kessler 11444* (LPB, NY, UC). Previously known from Panama, Colombia, Venezuela (Mickel in Davidse et al., 1995), and Ecuador (*Fay & Fay 3796*, MO, UC).

26612162

*ELAPHOGLOSSUM AMPHIOXYS* MICKEL—**Cochabamba**. Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1300 m, *Kessler 7537* (LPB, UC); Prov. José Carrasco Torrico, 149 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1000 m, *Kessler 7979* (LPB, UC). **La Paz**. Ticunhuaya, 5000 ft., *Tate 1056* (NY); Prov. Nor Yungas, Puerto Linares 39 km hacia Caranavi, después de la cumbre, 1410 m, *Beck 479* (LPB, NY); Prov. Caranavi, Serranía Bellavista, 41 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1450 m, *Kessler 11475* (LPB, NY, UC); Prov. Caranavi, Serranía Bellavista, 44 km de Caranavi hacia Sapecho, 15°40'S, 67°29'W, 1300 m, *Kessler 11561* (LPB, NY, UC); two other collections seen. Previously known only from Peru (Mickel in Tryon and Stolze, 1991).

26612161

*ELAPHOGLOSSUM AMPLUM* MICKEL—**Chuquisaca**. Prov. B. Boeto, 1 km de Nuevo Mundo a Padilla, 18°59'S, 64°18'W, 2100 m, *Kessler 5113* (LPB, NY, UC). **Cochabamba**. Prov. Ayopaya, 10 km Copata-Cotacajes, 16°38'S, 66°41'W, *Kessler 9456* (LPB, NY, UC); Prov. José Carrasco Torrico, 118 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, *Kessler 7090* (LPB, NY, UC). **La Paz**. Prov. Murillo, Valle de Zongo, subiendo del final del camino 22 km hacia la cumbre, 3200 m, *Beck 4044* (LPB, NY); Prov. Sud Yungas, La Paz-Chulumani road, 12 km E of Chuspipata, 16°15'S, 67°10'W, 2260 m, *Fay & Fay 2489* (MO, NY); Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Apolo, 15°11'S, 68°46'W, *Kessler 10412* (LPB, NY, UC). **Santa Cruz**. Prov. Vallegrande, 1 km de Loma Larga a Valle Grande, 18°45'S, 63°45'W, 2000 m, *Kessler 6421* (LPB, NY, UC); 11 additional collections seen. Previously known only from Peru (Mickel in Tryon and Stolze, 1991).

26612160

*ELAPHOGLOSSUM ANGUSTIUS* MICKEL—**La Paz**. Prov. Nor Yungas, 37 km N de Caranavi, 1520 m, *Fay & Fay 2153* (NY); Prov. Nor Yungas, 8 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2600, *Kessler 12120* (LPB, NY, UC); Prov. Caranavi, Serranía de Bellavista, 46 km de Caranavi hacia Sapecho, 15°39'S, 67°28'W, 1200 m, *Kessler 11612* (LPB, NY, UC). Previously known only from Peru (Mickel in Tryon and Stolze, 1991).

26612149

*ELAPHOGLOSSUM CILIATUM* (C. PRESL) T. MOORE—**La Paz**. Prov. Murillo, Zongo-Tal, Ortschaft Cahua, 1450 m, *Feuerer 8750 a* (NY). Previously known from Nicaragua to Panama, Colombia, Ecuador, and Peru (Mickel in Davidse et al., 1995).

26612143

*ELAPHOGLOSSUM DICHROUM* MICKEL—**La Paz**. Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Chullina, 15°10'S, 68°53'W, 3400 m, *Kessler 10641* (LPB, NY, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler 12001* (LPB, NY, UC). Previously known only from the type collection from n. Peru (Mickel in Tryon and Stolze, 1991).

26612138

*ELAPHOGLOSSUM ENSIFORME* MICKEL—**Cochabamba**. Prov. Chapare, Incachaca-Chusi, 2400 m, *Steinbach 9211* (NY); Prov. Chapare, Cochabamba 54 km hacia Villa Tunari, 2750 m, *Beck 1426* (LPB,

# AMERICAN FERN JOURNAL

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**Editor**

George Yatskievych  
Missouri Botanical Garden, P.O. Box 299,  
St. Louis, MO 63166-0299

**Associate Editors**

Gerald J. Gastony, Department of Biology, Indiana University,  
Bloomington, IN 47405-6801

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Lawrence, KS 66045

Robbin C. Moran, New York Botanical Garden,  
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## American Fern Journal

### EDITOR

GEORGE YATSKIEVYCH ..... Missouri Botanical Garden,  
P.O. Box 299, St. Louis, MO 63166-0299  
ph. (314) 577-9522, e-mail: gyatskievych@lehmann.mobot.org

### ASSOCIATE EDITORS

GERALD J. GASTONY ..... Dept. of Biology, Indiana University, Bloomington, IN 47405-6801  
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ROBBIN C. MORAN ..... New York Botanical Garden, Bronx, NY 10458-5126  
JAMES H. PECK ..... Dept. of Biology, University of Arkansas—Little Rock,  
2801 S. University Ave., Little Rock, AR 72204

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Volume 89, Number 4, October–December, pages 221–281, issued 22 December 1999.

NY); Prov. Ayopaya, 10 km Cocapata–Cotacajes, 16°38'S, 66°41'W, 2850 m, *Kessler 9418* (LPB, NY, UC); same general locality, 2700 m, *Kessler 9502* (LPB, NY, UC); same general locality, 3100 m, *Kessler 9548* (LPB, NY, UC). **La Paz.** Prov. Nor Yungas, 1.9 km NE of Chuspipata on road to Coroico, 16°18'S, 67°48'W, 2900 m, *Solomon 14929* (MO); Prov. Nor Yungas, trocha al valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3250 m, *Kessler 11808* (LPB, NY, UC); same general locality, 3000 m, *Kessler 11846* (LPB, NY, UC); Prov. Nor Yungas, 8 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2650 m, *Kessler 12057* (LPB, NY, UC); same general locality, 2500 m, *Kessler 12172* (LPB, NY, UC). Previously known only from two collections from Cuzco, Peru (Mickel in Tryon and Stolze, 1991).

26612134 *ELAPHOGLOSSUM GLOSSOPHYLLUM* Hieron.—**Cochabamba.** Prov. Ayopaya, 10 km Cocapata–Cotacajes, 16°38'S, 66°41'W, 3000 m, *Kessler 9348* (LPB, NY, UC); Prov. José Carrasco Torrico, 107 km antigua carretera Cochabamba–Villa Tunari, 17°10'S, 65°38'W, 3050 m, *Kessler 6662* (LPB, NY, UC); Prov. José Carrasco Torrico, km 104 al Chapare, 3100 m, *Steinbach 583* (NY). **La Paz.** Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Chullina, 15°10'S, 68°53'W, 3400 m, *Kessler 10604* (LPB, NY, UC); Prov. Nor Yungas, Unduavi, on old road, 16°19'S, 67°50'W, 3300 m, *Solomon 4904* (MO); Prov. Nor Yungas, Cotapata, north on trail on side of mountain, 16°15'S, 67°50'W, 3200 m, *Fay & Fay 2607* (MO); 25 additional collections seen. Previously known from Colombia, Ecuador and Peru (Mickel in Tryon and Stolze, 1991).

26611909 *ELAPHOGLOSSUM HERPESTES* Mickel.—**Cochabamba.** Prov. José Carrasco Torrico, 116 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2350 m, *Kessler 7065* (LPB, UC); Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7215* (LPB, UC); Prov. José Carrasco Torrico, 3 km de Siberia hacia Karahuasi, 17°48'S, 64°41'W, 2400 m, *Kessler 9146* (LPB, UC). **La Paz.** Prov. Nor Yungas, 19.8 km from Yolosa toward Chuspipata, 16°15'S, 67°45'W, 2280 m, *Fay & Fay 2192* (MO), *2197* (NY, MO); Prov. Nor Yungas, 20.2 km SW of Yolosa on road to Chuspipata, 16°16'S, 67°47'W, 2400 m, *Solomon 11750* (MO). Previously known only from Ecuador (Mickel, 1985).

0060375 *ELAPHOGLOSSUM HETEROMORPHUM* (Klotzsch) T. Moore, vel aff.—**La Paz.** Prov. J. Bautista Saavedra M., 12 km de Charazani hacia Apolo, 15°11'S, 68°46'W, 2500 m, *Kessler 10512* (LPB, NY, UC); Prov. Nor Yungas, 2 km de Chuspipata hacia Coroico, 16°22'S, 67°49'W, 2900 m, *Kessler 11934* (LPB, NY, UC). Previously known from Colombia, w. Venezuela, and Ecuador.

6612126 *ELAPHOGLOSSUM HICKENII* (Sodirol) C. Chr., vel aff.—**La Paz.** Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Apolo, 15°11'S, 68°46'W, 2400 m, *Kessler 10442* (LPB, NY, UC); Prov. Murillo, Valle de Zongo, 23.8 km N de la cumbre, 16°08'S, 68°07'W, 2900 m, *Solomon 16374* (LPB, NY, UC). Previously known from Ecuador and Peru (Mickel in Tryon and Stolze, 1991).

26611650 *ELAPHOGLOSSUM KILLIPII* Mickel.—**La Paz.** Prov. Nor Yungas, del desvío a Suapi, entrando 21 km, pasando Suapi, 1290 m, *Beck 13661* (LPB, NY). Previously known from Peru (Mickel in Tryon and Stolze, 1991).

6611648 *ELAPHOGLOSSUM LAMINARIOIDES* (Bory) T. Moore.—**La Paz.** Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°03'S, 68°29'W, *Kessler 10147* (LPB, NY, UC). Previously known from Venezuela, Ecuador, and Peru (Mickel in Tryon and Stolze, 1991).

26611642 *ELAPHOGLOSSUM LECHLERIANUM* (Mett.) T. Moore.—**Cochabamba.** Prov. José Carrasco Torrico, 116 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2350 m, *Kessler 7061* (LPB, UC); Cochabamba, Prov. Chapare, 1700 m, *Steinbach 9403* (NY). **La Paz.** Huancane, 2450 m, *Fay & Fay 2510* (NY); Cerro Uchumachi, 2550 m, *Beck 17489* (NY); Prov. Nor Yungas, 10 km de Chuspipata–Coroico, 16°24'S, 67°47'W, 2500 m *Kessler 12174* (LPB, NY, UC). **Dpto. unknown.** *Bang s.n.* (NY). Previously known from Ecuador and Peru (Mickel in Tryon and Stolze, 1991).

6611639 *ELAPHOGLOSSUM LITANUM* (Sodirol) C. Chr.—**Beni.** Prov. Ballivián, 25 km from Yucumo on Yucumo–Quiquibey road, in the Pilón Lajas, 15°17'S, 67°04'W, 950 m, *Fay & Fay 2767* (MO, NY, UC). **Cochabamba.** Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba–Villa Tunari,

17°07'S, 65°34'W, 1300 m, *Kessler 7611* (LPB, UC); Prov. José Carrasco Torrico, 134 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1650 m, *Kessler 7796* (LPB, UC); Prov. José Carrasco Torrico, 145 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1200 m, *Kessler 7967* (LPB, UC). **Santa Cruz.** Prov. Ichilo, 4 km al Sw del Campamento Macuñucú, 17°44'S, 63°35'W, 450 m, *Kessler 8674* (LPB, NY, UC). Erroneously cited as endemic to Peru by Mickel (in Tryon and Stolze, 1991), but previously already known from northwestern Ecuador and western Colombia, and also now known from eastern Ecuador (e.g., *Moran & Rohrbach 5292*, MO, UC).

26611634 *ELAPHOGLOSSUM MACILENTUM* MICKEL—**Cochabamba.** Prov. José Carrasco Torrico, Cavernas del Repechón, Parque Nacional Carrasco, 17°02'S, 65°26'W, 550 m, *Kessler 8300* (LPB, NY, UC). Previously known only from the type collection from s. Peru (Mickel in Tryon and Stolze, 1991).

26611633 *ELAPHOGLOSSUM MEGALURUM* MICKEL—**La Paz.** Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°02'S, 68°29'W, 1050 m, *Kessler 9942* (LPB, NY, UC). Previously known only from the type collection from n. Peru (Mickel in Tryon and Stolze, 1991).

26611632 *ELAPHOGLOSSUM MELADENIUM* MICKEL—**Cochabamba.** Prov. Ayopaya, 2 km al SE de Saila Pata, 16°54'S, 66°55'W, 3800 m, *Kessler 12464* (LPB, NY, UC); Prov. José Carrasco Torrico, 100 km antigua carretera Cochabamba-Villa Tunari, 17°12'S, 65°42'W, 3250 m, *Kessler 6724* (LPB, NY, UC). **La Paz.** Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Chullina, 15°10'S, 68°55'W, 3400 m, *Kessler 10631* (LPB, NY, UC); Prov. Larecaja, 40 km de Sorata a Quiabaya, 3500 m, *Kessler 4312* (LPB, NY), *4318* (AAU, LPB); Prov. Inquisivi, 7 km de Quime a Caxata, 16°59'S, 67°10'W, 3500 m, *Kessler 5900*, *5901* (AAU, NY). Previously known only from Peru (Mickel in Tryon and Stolze, 1991).

26601597 *ELAPHOGLOSSUM MELANOPUS* (KUNZE) T. MOORE—**La Paz.** Unduavi, 3300 m, *Buchtien 886* (US); Quiabaya, 3500 m, *Kessler 4320* (LPB, NY); Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3450 m, *Kessler 11721* (LPB, UC). **Dpto. unknown.** 6000', *Rusby 292* (NY, US). Previously known from Ecuador and also now Peru (*Macbride 3373*, NY).

26607197 *ELAPHOGLOSSUM MUSCOSUM* (Sw.) T. MOORE—**La Paz.** Prov. J. Bautista Saavedra M., 18 km de Charazani hacia Apolo, 15°10'S, 68°45'W, 2150 m, *Kessler 10555* (LPB, NY, UC). **Santa Cruz.** Prov. Ichilo, summit of cerro Amboró, 17°45'S, 63°39'W, 1470 m, *Nee 39131* (NY). Previously known from Mexico and the West Indies south to Peru (Mickel in Tryon and Stolze, 1991).

26611625 *ELAPHOGLOSSUM NIGRESCENS* (HOOK.) DIELS—**Cochabamba.** Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1300 m, *Kessler 7525*, *7536b*, *7842* (LPB, NY, UC); Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba-Villa Tunari, 17°06'S, 65°35'W, 1600 m, *Kessler 7395* (LPB, NY, UC). **La Paz.** Prov. Nor Yungas, Puerto Linares 39 km hacia Caranavi, después de la cumbre, 1410 m, *Beck 465* (LPB, NY). Previously known from Venezuela south to Peru (Mickel in Tryon and Stolze 1991).

26611621 *ELAPHOGLOSSUM OBTUSUM* MICKEL—**Beni.** 5 km NW of Guayaramerin, *Anderson 11818* (NY). Previously known only from Peru (Mickel in Tryon and Stolze, 1991), but now also from Ecuador (Morona-Santiago, *Ollgaard 1919*, AAU).

26611620 *ELAPHOGLOSSUM OCULATUM* MICKEL—**Cochabamba.** Prov. José Carrasco Torrico, 108 km antigua carretera Cochabamba-Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6619* (LPB, UC). **La Paz.** Prov. Inquisivi, along road between Loma Linda and Turculi, 16°38'S, 67°10'W, 1850 m, *Lewis 36881* (LPB, MO, UC); Prov. Sud Yungas, Huancané 7,5 km hacia el sudeste sobre el camino nuevo, 2410 m, *Beck 3134A* (LPB, NY); Prov. Nor Yungas, 10 km de Chuspipata hacia Coroico, 16°24'S, 67°47'W, 2500 m, *Kessler 12143* (LPB, NY, UC); Prov. Caranavi, Serranía Bellavista, 37 km de Caranavi hacia Sapecho, 15°40'S, 67°29'W, 1500 m, *Kessler 11362* (LPB, NY, UC). **Santa Cruz.** Prov. Valle Grande, 4 km de Loma Larga a Masicuri, 18°47'S, 63°53'W, 1600 m, *Kessler 6289* (LPB, UC); Prov. Manuel María Caballero, 50 km al norte de Mataral, 2000 m, *Smith et al. 13319* (LPB, MO, UC). Previously known only from Peru (Mickel in Tryon and Stolze, 1991).

- 50163803 *ELAPHOGLOSSUM PERUVIANUM* (L.D. GÓMEZ) MICKEL—**Cochabamba**. Prov. José Carrasco Torrico, 113 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°38'W, 2650 m, *Kessler 6934* (LPB, UC); Prov. José Carrasco Torrico, 117 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2350 m, *Kessler 7078* (LPB, UC). Previously known only from Peru (Mickel in Tryon and Stolze, 1991).
- 26611604 *ELAPHOGLOSSUM PILOSIUS* MICKEL—**Cochabamba**. Prov. José Carrasco Torrico, 85 km antigua carretera Cochabamba–Villa Tunari, 17°13'S, 65°43'W, 3650 m, *Kessler 6583* (LPB, UC); Prov. José Carrasco Torrico, 63 km antigua carretera Cochabamba–Villa Tunari, 17°15'S, 65°43'W, 3700 m, *Kessler 6879* (LPB, UC). Previously known from Costa Rica, Panama, Colombia, Venezuela, Ecuador, and Peru (Mickel in Tryon and Stolze, 1991; Mickel in Davidse et al., 1995).
- 26608583 *ELAPHOGLOSSUM PLUMOSUM* (FEÉ) T. MOORE, VEL. AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 112 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°38'W, 2700 m, *Kessler 6923* (LPB, NY, UC); Prov. José Carrasco Torrico, 114 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2200 m, *Kessler 6991* (LPB, NY, UC); Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2200 m, *Kessler 7249* (LPB, NY, UC), same locality, *Kessler 7287* (LPB, NY, UC). Previously known from the Guianas, Venezuela, Colombia, Ecuador, Peru, and Brazil (Mickel in Tryon and Stolze, 1991).
- 26611599 *ELAPHOGLOSSUM PUMILIO* MICKEL—**La Paz**. Prov. J. Bautista Saavedra M., Charazani-Tal, bei den Felsen auf der linken Talseite unmittelbar bei der Furt bei Cilij, 2750 m, *Feuerer 6727a* (NY); Prov. Larecaja, 56 km de Sorata a Consata, 2600 m, *Kessler 4351* (AAU, LPB). Previously known only from Peru (Mickel in Tryon and Stolze, 1991).
- 26611595 *ELAPHOGLOSSUM RAYWAENSE* (JENMAN) ALSTON—**Cochabamba**. Prov. Chapare, El Palmar, 155 km antigua carretera Cochabamba–Villa Tunari, 17°05'S, 65°32'W, 750 m, *Kessler 8107* (LPB, UC); Prov. José Carrasco Torrico, Valle del Sajta, 17°08'S, 64°50'W, 220 m, *Kessler 8836* (LPB, UC). Previously known from Venezuela, Guianas, Ecuador, Peru, and Amazonian Brazil (Mickel in Tryon and Stolze, 1991).
- 26611584 *ELAPHOGLOSSUM SETIGERUM* (SODIRO) DIELS—**Cochabamba**. Prov. José Carrasco Torrico, 111 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2750 m, *Kessler 6845* (LPB, NY, UC); Prov. José Carrasco Torrico, 113 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°38'W, 2900 m, *Kessler 6911* (LPB, NY, UC); Prov. José Carrasco Torrico, 133 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7262* (LPB, NY, UC). **La Paz**. Chuspipata, 2450 m, *Gentry 44713* (MO); Huarinillas, 2800 m, *Beck 21896* (LPB, NY); Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3000 m, *Kessler 11877* (LPB, NY, UC); Prov. Nor Yungas, 10 km de Chuspipata–Coroico, 16°24'S, 67°47'W, 2500 m, *Kessler 12145* (LPB, NY, UC). Previously known from Ecuador and Peru (Mickel in Tryon and Stolze, 1991). Bolivian specimens of this species differ from Ecuadorian ones by the unequal-sided, attenuate bases on the fertile blades.
- 26611580 *ELAPHOGLOSSUM SMITHII* (BAKER) H. CHRIST, VEL. AFF.—**La Paz**. Prov. Caranavi, 37 km Caranavi–Sapecho, 15°40'S, 67°29'W, 1500 m, *Kessler 11270* (LPB, NY, UC). Previously known from Hispaniola, Lesser Antilles, Costa Rica, and Panama (Mickel in Davidse et al., 1995) but recently also collected in Ecuador (Pichincha, *Ollgaard 1014*, AAU; Morona-Santiago, *Ollgaard 2703*, AAU).
- 26611570 *ELAPHOGLOSSUM ZEBRINUM* MICKEL, VEL. AFF.—**Cochabamba**. Prov. Chapare, Parque Machia, 1 km al E de Villa Tunari, 16°58'S, 65°24'W, 350 m, *Kessler 8489* (LPB, NY, UC). Previously known only from Colombia and Peru (Mickel in Tryon and Stolze, 1991), and now also Ecuador (*Fay & Fay 2745*, UC). This is related to a group of white-streaked species with blades long-attenuate at the base, such as *E. oblanceolatum* C. Chr. and *E. lellingeri* Mickel from Colombia and Ecuador. *Elaphoglossum zebrinum* appears to grow at much lower elevations than its relatives (mostly 1000–2900 m) and has more slender rhizomes.
- 26610944 *ERIOSORUS NOVOGRANATENSIS* A.F. TRYON, VEL. AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 108



km antigua carretera Cochabamba-Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6598* (LPB, UC). Previously known from Colombia (Tryon, 1970). Attributed a wider range by Moran (in Davidse et al., 1995), in Nicaragua, Costa Rica, Panama, Venezuela, Ecuador, Peru, and Bolivia, but the identification of the specimens upon which these records are based is questionable.

26614212 *HUPERZIA CAPILLARIS* (SODIRO) HOLUB—**La Paz**. Prov. Caranavi, Serranía Bellavista, 37 km Caranavi-Sapecho, 15°40'S, 67°29'W, 1500 m, *Kessler 11294* (AAU, GOET, LPB). Previously known from s. Mexico to Panama, Colombia, Venezuela, Ecuador, and Amazonian Brazil (Øllgaard, 1992; Øllgaard in Davidse et al., 1995).

26609267 *HUPERZIA SUBULATA* (POIR.) HOLUB—**Cochabamba**. Prov. Chapare, Serranía de Callejas NE Colomi, near Aguirre-El Palmar road, 3000 m, *Müller 6624* (GOET, LPB). Previously known from Honduras, Costa Rica, Colombia, Ecuador, and Peru (Øllgaard in Tryon and Stolze, 1994; Øllgaard in Davidse et al., 1995).

26609268 *HUPERZIA TENUIS* (WILLD.) TREVIS.—**Cochabamba**. Sailapata [= Saila Pata], Ayopaya, 3500 m, *Cárdenas 3221* (GH). Previously known from Costa Rica, Colombia, Venezuela, Ecuador, and Peru (Øllgaard in Tryon and Stolze, 1994; Øllgaard in Davidse et al., 1995; B. Øllgaard, pers. comm.).

26609271 *HUPERZIA WILSONII* (UNDERW. & F.E. LLOYD) B. ØLLG.—**Cochabamba**. Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°35'W, 1500 m, *Kessler 7772* (AAU, LPB). Previously known from Antilles, Guatemala, Costa Rica, Panama, Colombia, Venezuela, Ecuador, and Peru (Øllgaard in Davidse et al., 1995).

26606360 *HYMENOPHYLLUM* (SUBG. *SPHAEROCIONIUM*) *AMABILE* C.V. MORTON—**La Paz**. Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3450 m, *Kessler 11738*, (LPB, UC). Previously known from Ecuador and Peru (Morton, 1947; Tryon and Stolze, 1989a).

50054832 *HYMENOPHYLLUM* (SUBG. *SPHAEROCIONIUM*) *HEMIDIMORPHUM* R.C. MORAN & B. ØLLG.—**Cochabamba**. Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7180*, (LPB, UC); Prov. José Carrasco Torrico, 132 km antigua carretera Cochabamba-Villa Tunari, 17°06'S, 65°35'W, 1950 m, *Kessler 7312* (LPB, UC). Previously known from Costa Rica and Ecuador (Moran and Øllgaard, 1995; Rojas-Alvarado, 1996), also now Colombia (*Silverstone-Sopkin 4297*, UC).

26606229 *HYMENOPHYLLUM* (SUBG. *MECODIUM*) *MATHEWSII* BOSCH—**Cochabamba**. Prov. Ayopaya, Pujyani, 10 km Cocapata-Cotacajes, 16°38'S, 66°41'W, 2900 m, *Kessler 9315, 9330* (LPB, UC). Previously known from Ecuador and Peru (Tryon and Stolze, 1989a).

26607272 *HYMENOPHYLLUM* (SUBG. *SPHAEROCIONIUM*) *TRAPEZOIDALE* LIEBM.—**Cochabamba**. Prov. José Carrasco Torrico, 7 km de Siberia hacia Karahuasi, 17°47'S, 64°41'W, 2200 m, *Kessler 9101* (LPB, UC). **La Paz**. Prov. Sud Yungas, Choquetanga, ca. 2980 m, *Lewis 86-334* (F, UC). Previously known from s. Mexico, Guatemala to Panama, Colombia, Venezuela, and Surinam (Morton, 1947; Pacheco in Davidse et al., 1995).

0069999 *HYPOLEPIS POEPPIGII* (KUNZE) R.A. RODR., VEL AFF.—**Cochabamba**. Prov. Ayopaya, 10 km Cocapata-Cotacajes, 16°38'S, 66°41'W, 3100 m, *Kessler 9535* (LPB, UC). Previously known from Chile (including Juan Fernandez), and s. Argentina (Rodríguez in Marticorena and Rodríguez, 1995).

6614947 *HYPOLEPIS VISCOSA* METT.—**La Paz**. Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2700 m, *Kessler 12087* (LPB, UC). Previously known from Guatemala, Costa Rica, Panama, Colombia, and Venezuela (Moran in Davidse et al., 1995). Moran also reported the species from s. Mexico, apparently erroneously.

50163777 *ISOËTES GARDNERIANA* KUNZE EX METT., VEL AFF.—**Santa Cruz**. Ñuflo de Chávez, Lomerío, ca. 63 km S of Concepción to La Trancas, then ca. 10 km N, ca. 16°30'S, 61°53'W, ca. 500 m, *Abbott 16374* (UC, USZ); Ñuflo de Chávez, Lomerío, ca. 63 km S of Concepción to La Trancas, then ca. 0.5 km

N, ca. 16°35'S, 61°52'W, ca. 500 m, *Abbott 16383* (UC, USZ). Previously reported from Brazil and Paraguay (Pfeiffer, 1922).

26606391 *JAMESONIA GOUDOTII* (HIERON.) C. CHR.?—**La Paz**. Prov. P. D. Murillo, entre Pongo y Unduavi, Mina 50, subiendo hacia la Mina San Luis, 3960 m, *Beck 21524, 21525* (LPB, UC). Previously known from Colombia, Ecuador, and Peru (Tryon, 1962; Tryon and Stolze, 1989b).

26612233 *LASTREOPSIS KILLIPII* (MAXON) TINDALE—**La Paz**. Prov. Nor Yungas, 10 km de Chuspipata hacia Coroico, 16°24'S, 67°49'W, 2500 m, *Kessler 12133* (LPB, UC). Previously known from Costa Rica, Panama, Colombia, s. Venezuela, Ecuador, and Peru (Tindale, 1965; Tryon and Stolze, 1991; Moran in Davidse et al., 1995; Smith in Steyermark et al., 1995).

26614747 *LELLINGERIA MAJOR* (COPEL.) A.R. SM. & R.C. MORAN, VEL AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 107 km antigua carretera Cochabamba-Villa Tunari, 17°12'S, 65°42'W, 3300 m, *Kessler 6738* (LPB, UC). Previously known from Venezuela, Colombia, Ecuador, and Peru (Smith et al., 1991; Tryon and Stolze, 1993).

26614751 *LELLINGERIA MYOSUROIDES* (SW.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 109 km antigua carretera Cochabamba-Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6649* (LPB, UC); Prov. José Carrasco Torrico, 114 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, 2550 m, *Kessler 7002* (LPB, UC); Prov. José Carrasco Torrico, 8 km de Empalme hacia Siberia, 17°46'S, 64°48'W, 2900 m, *Kessler 9206* (LPB, UC). **La Paz**. Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3250 m, *Kessler 11823* (LPB, UC); Prov. Nor Yungas, 2 km de Chuspipata hacia Coroico, 16°22'S, 67°49'W, 2900 m, *Kessler 11948* (LPB, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler 12022* (LPB, UC). Previously known from the Greater Antilles, Costa Rica, Panama, Colombia, Venezuela, Ecuador, and Peru; reports from Madagascar and Réunion are possibly another species (Smith et al., 1991; Tryon and Stolze, 1993; Moran and Smith in Davidse et al., 1995).

26614759 *LELLINGERIA PHLEGMARIA* (J. SM.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 115 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, 2500 m, *Kessler 6966* (LPB, UC). **La Paz**. Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler 12041* (LPB, UC). Previously known from Honduras, Costa Rica, Colombia, Venezuela, Guyana, Ecuador, and Peru (Smith et al., 1991; Moran and Smith in Davidse et al., 1995).

26614775 *LELLINGERIA SUSPensa* (L.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. Chapare, El Palmar, 17°05'S, 65°32'W, 700 m, *Kessler 8141* (LPB, UC). Previously known from the Antilles, Costa Rica, Panama, Colombia, Venezuela, the Guianas, Trinidad (Smith et al., 1991; Moran and Smith in Davidse et al., 1995).

26614779 *LELLINGERIA TUNGURAHUAE* (ROSENST.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. Chapare, 80 km carretera antigua Cochabamba-Villa Tunari, 17°17'S, 65°51'W, 2200 m, *Kessler 8208* (LPB, UC). Previously known from Colombia, Ecuador, and Peru (Smith et al., 1991; Tryon and Stolze, 1993).

26608643 *LINDSAEA TAENIATA* K.U. KRAMER—**Cochabamba**. Prov. Chapare, Cavernas del Repechón, Parque Nacional Carrasco, 17°02'S, 65°26'W, 550 m, *Kessler 8310* (LPB, UC); Prov. José Carrasco Torrico, Valle de Sajta, 17°08'S, 64°50'W, 220 m, *Kessler 8810* (LPB, UC). Previously known from Costa Rica, Panama, Colombia, Venezuela, Ecuador, Peru, and n. Brazil (Kramer, 1957; Moran in Davidse et al., 1995).

26609948 *MEGALASTRUM ADENOPTERIS* (C. CHR.) A.R. SM. & R.C. MORAN—**Santa Cruz**. Prov. Valle Grande, 12 km de Loma Larga a Masicurí, 18°47'S, 63°57'W, 1250 m, *Kessler 5971* (LPB, UC); Prov. Valle Grande, 4 km de Loma Larga a Masicurí, 18°47'S, 63°53'W, 1750 m, *Kessler 6285* (LPB, UC). Previously known from s. Brazil and nw. Argentina (Christensen, 1920).

26609955 *MEGALASTRUM CONNEXUM* (KAULF.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba-Villa Tunari, 17°06'S, 65°35'W, 1600 m, *Kessler 7426*

(LPB, UC). Previously known from Brazil, Uruguay, and Paraguay [var. *lateadnatum* (H. Christ) A.R. Sm. & R.C. Moran] (Christensen, 1920; Smith and Moran, 1987).

26614782 *MELPOMENE ANFRACTUOSA* (KUNZE EX KLOTZSCH) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 116 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2400 m, *Kessler 7029* (LPB, UC); Prov. José Carrasco Torrico, 118 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2300 m, *Kessler 7094* (LPB, UC); Prov. José Carrasco Torrico, 123 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°37'W, 2100 m, *Kessler 7146* (LPB, UC). **La Paz**. Prov. Nor Yungas, 8 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2650 m, *Kessler 12128* (LPB, UC); Prov. Nor Yungas, 10 km de Chuspipata hacia Coroico, 16°24'S, 67°47'W, 2500 m, *Kessler 12199* (LPB, UC). Previously known from Antilles, s. Mexico, Central America, Colombia, Venezuela, Guyana, Ecuador, Peru (Smith and Moran, 1992; Tryon and Stolze, 1993; Moran and Smith in Davidse et al., 1995).

26614783 *MELPOMENE ASSURGENS* (MAXON) A.R. SM. & R.C. MORAN, VEL AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 108 km antigua carretera Cochabamba–Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6569* (LPB, UC); Prov. José Carrasco Torrico, 107 km antigua carretera Cochabamba—Villa Tunari, 17°10'S, 65°38'W, 3050 m, *Kessler 6663* (LPB, UC); Prov. José Carrasco Torrico, 94 km antigua carretera Cochabamba–Villa Tunari, 17°12'S, 65°41'W, 3500 m, *Kessler 6773* (LPB, UC). Previously known from Colombia, Ecuador, and Peru (Smith and Moran, 1992).

26614799 *MELPOMENE VERNICOSA* (COPEL.) A.R. SM. & R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 3 km de Siberia hacia Karahuasi, 17°48'S, 64°41'W, 2400 m, *Kessler 9141* (LPB, UC). Previously known from Colombia, w. Venezuela, and Ecuador (Smith and Moran, 1992). Closely related to *M. xiphopteroides* (Liebm.) A.R. Sm. & R.C. Moran, with which it was synonymized by Moran and Smith (in Davidse et al., 1995). However, *M. vernicosa* has much more coriaceous blades, strongly inrolled segment margins, and more densely setose blades abaxially and along the midrib adaxially; also it is generally a larger species. This group of *Melpomene*, and *Melpomene* in general, is badly in need of monographic attention to discriminate better the existing species and deal with numerous undescribed ones from middle to high elevation in the Andes.

26609409 *MICROGRAMMA MEGALOPHYLLA* (DESV.) DE LA SOTA—**Beni**. 13 km E of Riberalta on road to Guayaramerín, then 3 km N on side road, 10°58'S, 65°58'W, 230 m, *Solomon 7820* (MO, UC). **Santa Cruz**. Prov. Velasco, Parque Nacional Noel Kempff M., Campamento La Torre, 13°39'20"S, 60°49'08"W, 200 m, *Arroyo et al. 607* (MO, UC, USZ); Prov. Velasco, Parque Nacional Noel Kempff M., Parcela II, 13°33'50"S, 61°01'02"W, 200 m, *Gutiérrez et al. 1333* (MO, UC, USZ); Prov. Velasco, Parque Nacional Noel Kempff M., Campamento Los Fierros, 14°33'30"S, 60°49'12"W, 155 m, *Quevedo et al. 2425* (MO, UC, USZ). Previously known from Colombia, s. Venezuela, Guyana, Ecuador, Peru, and Bolivia, and Amazonian Brazil (Tryon and Stolze, 1993).

26610569 *MICROGRAMMA MORTONIANA* DE LA SOTA—**La Paz**. Prov. Franz Tamayo, Río Bilipisa, 10 km al NW de Apolo, 14°36'S, 68°27'W, 1100 m, *Kessler 11004, 11005* (LPB, UC). Previously known from northeastern Argentina (de la Sota, 1973). The two Bolivian specimens cited, although lacking fertile fronds, agree well with specimens seen from Argentina in the rhizome scales. De la Sota (1973) postulated that *M. mortoniana* was the fertile allopolyploid derivative between *M. squamulosa* (Kaulf.) de la Sota and *M. vacciniifolia* (Langsd. & Fisch.) Copel., which certainly seems plausible on the basis of its intermediate morphology. Interestingly, however, *M. vacciniifolia* has not yet been recorded in the Tuichi valley where *M. mortoniana* has been collected alongside *M. squamulosa*.

50002687 *MICROGRAMMA ROSMARINIFOLIA* (KUNTH) R.M. TRYON & A.F. TRYON—**Cochabamba**. Prov. Ayopaya, 2 km al S de Saila Pata, 16°54'S, 66°56'W, 3050 m, *Kessler 12387* (LPB, UC); Prov. Ayopaya, 1–2 km N of Machaca and 6 km SW of Independencia, 17°05'S, 66°52'W, 2930 m, *Lewis 86–2377* (F, LPB, UC). Previously known only from Ecuador and Peru (Tryon and Stolze, 1993).

26600226 *MICROLEPIA SPELUNCAE* (L.) T. MOORE—**La Paz**. Prov. Abel Iturralde, Río San Antonio, 46 km de

Ixiamas a Alto Madidi, 13°38'S, 68°26'W, 300 m, *Kessler 11126* (LPB, UC). Previously known from the Greater Antilles and widely scattered localities in South America (Tryon and Stolze, 1989b), especially s. Brazil and Paraguay.

- 26615362 *MICROPOLYPODIUM BLEPHARIDEUM* (COPEL.) A.R. SM.—**Cochabamba**. Prov. José Carrasco Torrico, 108 km antigua carretera Cochabamba–Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6566, 6618* (LPB, UC); Prov. José Carrasco Torrico, 118 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2300 m, *Kessler 7092* (LPB, UC); Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7169, 7174* (LPB, UC). **La Paz**. Prov. Nor Yungas, arriba de Coroico, en la cima del cerro Uchumachi, 2550 m, *Beck 17493* (LPB, UC); Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3000 m, *Kessler 11892* (LPB, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler 11973* (LPB, UC); Prov. Nor Yungas, 10 km de Chuspipata hacia Coroico, 16°24'S, 67°47'W, 2500 m, *Kessler 12195* (LPB, UC). Previously known only from Peru (Smith, 1992; Tryon and Stolze, 1993).
- 26615363 *MICROPOLYPODIUM CAUCANUM* (HIERON.) A.R. SM.—**Cochabamba**. Prov. José Carrasco Torrico, 118 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°37'W, 2100 m, *Kessler 7143* (LPB, UC). Previously known from Costa Rica, Panama, Colombia, Venezuela, Guyana, Ecuador, and perhaps n. Brazil (Smith, 1992; Smith in Davidse et al., 1995).
- 26615406 *MICROPOLYPODIUM TRUNCICOLA* (KLOTZSCH) A.R. SM.—**Cochabamba**. Prov. José Carrasco Torrico, 130 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7177* (LPB, UC). **La Paz**. Prov. J. Bautista Saavedra M., Cerro Asunta Pata, entre Apolo y Charazani, 15°03'S, 68°29'W, 1500 m, *Kessler 10234* (LPB, UC). Previously known from Costa Rica, Colombia, Venezuela, Ecuador, and Peru (Smith, 1992; Smith in Davidse et al., 1995).
- 26610560 *NIPHIDIUM RUFOSQUAMATUM* LELLINGER—**Beni**. Prov. Ballivian, Cumbre de la Serranía del Pilón Lajas, 13–15 km de Yucumo, 15°13'S, 67°03'W, 700–800 m, *Smith et al. 13293* (LPM, MO, UC); Prov. Ballivian, Cumbre de la Serranía del Pilón Lajas, carretera Caranavi–San Borja, 25 km de Yucumo, 15°17'S, 67°04'W, 850–900 m, *Smith et al. 14034* (UC). Previously known only from s. Brazil (Lellinger, 1972).
- 26609307 *POLYBOTRYA ATTENUATA* R.C. MORAN—**Cochabamba**. Prov. José Carrasco Torrico, 133 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler 7257* (LPB, UC); Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°34'W, 1300 m, *Kessler 7650* (LPB, UC); Prov. José Carrasco Torrico, 141 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°33'W, 1400 m, *Kessler 7706* (LPB, UC); Prov. José Carrasco Torrico, 136 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°35'W, 1550 m, *Kessler 7868* (LPB, UC). Previously known only from the western side of the Andes in Colombia (Moran, 1987). Of the collections cited above, only *Kessler 7257* is fertile.
- 26609312 *POLYBOTRYA BOTRYOIDES* (BAKER) C. CHR., VEL AFF.—**Cochabamba**. Prov. José Carrasco Torrico, 137 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°35'W, 1500 m, *Kessler 7761* (LPB, UC). Previously known only from Colombia (Moran, 1987). This and the previous species are both remarkably disjunct from Colombia.
- 50044172 *POLYSTICHUM TURRIALBAE* H. CHRIST—**Cochabamba**. Prov. Ayopaya, 10 km Cocapata–Cotacajes, 16°38'S, 66°41'W, 2850 m, *Kessler 9443* (LPB, UC); same general locality, 3100 m, *Kessler et al. 9539* (LPB, UC); Prov. Ayopaya, 2 km al N de Saila Pata, 16°54'S, 66°56'W, 3100 m, *Kessler 12403* (LPB, UC). Previously known from Mexico, Costa Rica, and Panama (Mickel and Smith, unpublished data). This is one of the few indusiate species of *Polystichum* in Andean regions.
- 26602973 *PTERIS CONSANGUINEA* METT. EX KUHN—**Cochabamba**. Prov. José Carrasco Torrico, 147 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°34'W, 2100 m, *Kessler 7931* (LPB, UC). **La Paz**. Prov. Caranavi, Serranía Bellavista, 38 km de Caranavi hacia Sapecho, 15°40'S, 67°29'W, 1500 m, *Kessler 11395* (LPB, UC). Previously known from Venezuela (Smith, 1985; Tryon and Stolze,

1989b), but also in Colombia (e.g., *van der Werff* 9732, UC) and Ecuador (e.g., *Moran & Rohrbach* 5251, UC).

26602464 *PTERIS GRANDIFOLIA* L.—**La Paz**. Prov. Sud Yungas, Alto Beni, 500 m, *Seidel & Vaquiata* 7773 (LPB, UC). Previously known from the Antilles, s. Mexico, Guatemala to Panama, Colombia, Venezuela, Trinidad, Ecuador, Peru, and Brazil (*Moran* in *Davidse et al.*, 1995).

26613645 *PTERIS PEARCEI* BAKER—**Beni**. Prov. Ballivian, 25 km from Yucumo on Yucumo–Quiquibey road, in the Pilón Lajas, 15°17'S, 67°04'W, 950 m, *Fay & Fay* 2711 (UC). Previously known from Colombia, Venezuela, Peru, and n. Brazil (*Tryon* and *Stolze* [1989b] treating the species under the synonym *P. petiolulata* R.M. *Tryon*) (*Smith* in *Steyermark et al.*, 1995).

26600837 *PTERIS TRIPARTITA* SW.—**Cochabamba**. Prov. José Carrasco Torrico, Projec to Valle del Sacta, 241 km W of Santa Cruz, 219 km E of Cochabamba, 17°12'S, 64°43'W, 290 m, 8, 9, and 12 Jul 1989, *Fay & Fay* 2285, 2303, 2348 (LPB, MO, UC); Prov. José Carrasco Torrico, Valle de Sajta, 17°08'S, 64°50'W, 220 m, 5 Oct 1996, *Kessler* 8829 (LPB, UC). In the Neotropics, previously known from Antilles, Costa Rica, Panama, Colombia, Venezuela, Guianas, Ecuador, and Peru; introduced and naturalized from the Old World (*Moran* in *Davidse et al.*, 1995).

50163783 *SELAGINELLA* CF. *CALOSTICHA* SPRING—**Cochabamba**. Prov. José Carrasco Torrico, 136 km antigua carretera Cochabamba–Villa Tunari, 17°06'S, 65°34'W, 1700 m, *Kessler* 7370 (LPB, UC). Previously known from Venezuela and Peru (*Alston et al.*, 1981).

50070458 *SELAGINELLA CAVIFOLIA* A. BRAUN—**La Paz**. Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3000 m, *Kessler et al.* 11893 (UC). Previously known from Colombia, Venezuela, and Ecuador (*Alston et al.*, 1981; *Valdespino*, 1995).

50163799 *SELAGINELLA MORITZIANA* SPRING VAR. *MORITZIANA*—**Cochabamba**. Prov. José Carrasco Torrico, 108 km antigua carretera Cochabamba–Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler* 6550 (LPB, UC); Prov. José Carrasco Torrico, 107 km antigua carretera Cochabamba–Villa Tunari, 17°10'S, 65°38'W, 3050 m, *Kessler* 6677 (LPB, UC); Prov. José Carrasco Torrico, 115 km antigua carretera Cochabamba–Villa Tunari, 17°08'S, 65°38'W, 2500 m, *Kessler* 6962 (LPB, UC); Prov. José Carrasco Torrico, 133 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°36'W, 2000 m, *Kessler* 7267 (LPB, UC); Prov. José Carrasco Torrico, 108 km antigua carretera Cochabamba–Villa Tunari, 17°06'S, 65°35'W, 1950 m, *Kessler* 7317 (LPB, UC); Prov. José Carrasco Torrico, 132 km antigua carretera Cochabamba–Villa Tunari, 17°06'S, 65°35'W, 1950 m, *Kessler* 7321 (LPB, UC). **La Paz**. Prov. Nor Yungas, 2 km de Chuspipata hacia Coroico, 16°22'S, 67°49'W, 2900 m, *Kessler* 11898 (LPB, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler* 12025 (LPB, UC); Prov. Nor Yungas, 8 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2650 m, *Kessler* 12129 (LPB, UC); Prov. Nor Yungas, 10 km de Chuspipata hacia Coroico, 16°24'S, 67°47'W, 2500 m, *Kessler* 12202 (LPB, UC). Previously known from s. Mexico, Guatemala, Honduras, Costa Rica, Panama, Colombia, Venezuela, Ecuador, and Peru (*Valdespino*, 1995); *Alston et al.* (1981) circumscribed the species much more narrowly, with a range only in Venezuela and Ecuador. *Valdespino* recognized three varieties, and the most widespread one, var. *moritziana*, appears to be the one occurring in Bolivia. *Selaginella moritziana* often produces sori from axils on proximal branches.

26610869 *SELAGINELLA REVOLUTA* BAKER—**Cochabamba**. Prov. José Carrasco Torrico, Valle de Sajta, 17°08'S, 64°50'W, 220 m, *Kessler* 8820 (LPB, UC). Previously known from Panama, Colombia, Venezuela, Guianas, Peru, and Amazonian Brazil (*Alston et al.*, 1981; *Fraile* in *Davidse et al.* [1995] cited Bolivia in the range without documentation).

26624010 *STICHERUS PERUVIANUS* (MAXON) A.R. SM., M. KESSLER & J. GONZALES, COMB. NOV.—*Dicranopteris peruviana* Maxon, Amer. Fern J. 33:133. 1943.—**Cochabamba**. Prov. Chapare, 163 km W of El Sacta, 56 km E of Cochabamba, 17°20'S, 65°50'W, 2460 m, *Fay & Fay* 2386 (LPB, MO, UC). **La Paz**. Prov. Nor Yungas, Cotapata, roadside behind gas station, 16°15'S, 67°50'W, 3225 m, *Fay & Fay* 2465 (LPB, MO, UC); Prov. Sud Yungas, La Paz–Chulumani road, 15.1 km W of Chulumani,

9.3 km from Huancané, 16°15'S, 67°30'W, 2450 m, *Fay & Fay 2584* (LPB, MO, UC). Previously known only from Peru (Tryon and Stolze, 1989a).

26604459 *STIGMATOPTERIS LECHLERI* (METT.) C. CHR.—**La Paz**. Prov. Caranavi, Serranía Bellavista, 47 km de Caranavi hacia Sapecho, 15°29'S, 67°28'W, 1150 m, *Kessler 11645* (LPB, UC). Previously known from Costa Rica, Colombia, w. Venezuela, Ecuador, and Peru (Moran, 1991).

26612240 *TECTARIA ANTIOQUOIANA* (BAKER) C. CHR., VEL AFF.—**Cochabamba**. Prov. Chapare, Parque Ecoturístico Machia, 1 km al E de Villa Tunari, 16°58'S, 65°24'W, 400 m, *Kessler 8540* (LPB, UC). Previously known from Nicaragua, Costa Rica, Panama, Colombia, and Venezuela (Moran in Davidse et al., 1995).

26612242 *TECTARIA LIZARZABURUI* (SODIRO) C. CHR., VEL AFF.—**La Paz**. Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Apolo, 15°11'S, 68°46'W, 2400 m, *Kessler 11443* (LPB, UC). Previously known from Colombia, Venezuela, Ecuador, and Peru (Tryon and Stolze, 1991; Smith in Steyermark et al., 1995).

26615192 *TECTARIA PILOSA* (FÉE) R. C. MORAN?—**Beni**. Prov. Gral. Ballivián, 12 km por el camino maderero, al SW del km 12 Yucumo–Rurrenabaque, 15°04'S, 67°07'W, 450 m, *Kessler 10692* (LPB, UC). **Cochabamba**. Prov. Chapare, Cavernas del Repechón, Parque Nacional Carrasco, 17°02'S, 65°26'W, 550 m, *Kessler 8352* (LPB, UC); Prov. Chapare, 78 km W of El Sacta, Proyecto Valle del Sacta, 241 km W of Santa Cruz, 17°00'S, 65°25'W, 355 m, *Fay & Fay 2378* (LPB, MO, UC). **La Paz**. Prov. Caranavi, Serranía Bellavista, 37 km de Caranavi hacia Sapecho, 15°40'S, 67°29'W, 1500 m, *Kessler 11298* (LPB, UC). Previously known from Jamaica, Costa Rica, Panama, Colombia, Ecuador, Peru, and s. Brazil (Moran in Davidse et al., 1995).

26617226 *TERPSICHORE MOLLISSIMA* (FÉE) A.R. SM., VEL AFF.—**La Paz**. Prov. Caranavi, Serranía Bellavista, 47 km de Caranavi hacia Sapecho, 15°39'S, 67°28'W, 1150 m, *Kessler 11676* (LPB). Previously known from Antilles, s. Mexico to Panama, Colombia, Venezuela, Guianas, and Ecuador (Smith and Moran in Davidse et al., 1995). This species is peculiar in lacking rhizome scales, and is most similar and closely related to *T. senilis* (Fée) A.R. Sm. (also known from Bolivia), which has rhizome scales.

26608584 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *AMPHIOXYPTERIS* (SODIRO) A.R. SM.—**La Paz**. Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°02'S, 68°29'W, 1200 m, *Kessler 9974* (LPB, UC). Previously known from Panama, Colombia, and Ecuador (Smith 1983; Smith in Davidse et al., 1995).

26615165 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *ANDICOLA* A. R. SM.—**Cochabamba**. Prov. José Carrasco Torrico, 72 km antigua carretera Cochabamba–Villa Tunari, 17°14'S, 65°13'W, 3750 m, *Kessler 6894* (LPB, UC); Prov. Ayopaya, 10 km Cocapata–Cotacajes, 16°38'S, 66°41'W, 3050 m, *Kessler 9389* (LPB, UC). **La Paz**. Prov. J. Bautista Saavedra M., 15 km de Charazani hacia Chullina, 15°10'S, 68°53', 3400 m, *Kessler 10647, 10652* (LPB, UC); Prov. Nor Yungas, Unduavi a Chulumani, 3125 m, *Schmit 169B* (LPB, UC); Prov. Nor Yungas, Unduavi, 3300 m, *Buchtien 2703, 2710* (UC). Previously known only from Peru (Smith in Tryon and Stolze, 1992).

26607473 *THELYPTERIS* (SUBG. *GONIOPTERIS*) *BIOLLEYI* (H. CHRIST) PROCTOR—**La Paz**. Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°02'S, 68°29'W, 1450 m, *Kessler 9897* (LPB, UC); Prov. J. Bautista Saavedra M., 10 km de Camata hacia Apolo, 15°13'S, 68°41'W, 1300 m, *Kessler 10344* (LPB, UC); Prov. Caranavi, Serranía Bellavista, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1300 m, *Kessler 11268* (LPB, UC). Previously known from Jamaica, s. Mexico to Panama, and Colombia to Peru, Venezuela, and n. Brazil (Smith in Tryon and Stolze, 1992; Smith in Davidse et al., 1995).

26614366 *THELYPTERIS* (SUBG. *STEIROPTERIS*) *DECUSSATA* (L.) PROCTOR VAR. *DECUSSATA*—**Cochabamba**. Prov. José Carrasco Torrico, 141 km antigua carretera Cochabamba–Villa Tunari, 17°07'S, 65°33'W, 1400 m, *Kessler 7739* (LPB, UC); Prov. Chapare, 151 km antigua carretera Cochabamba–Villa Tunari,

17°05'S, 65°34'W, 900 m, *Kessler 8073* (LPB, UC). **La Paz.** Prov. J. Bautista Saavedra M., Pauji-Yuyo, entre Apolo y Charazani, 15°03'S, 68°29'W, 1350 m, *Kessler 10113* (LPB, UC); Prov. Caranavi, Serranía de Bellavista, 47 km de Caranavi hacia Sapecho, 15°29'S, 67°28'W, 1150 m, *Kessler 11644* (LPB). Previously known from Antilles, Guatemala to Panama, Colombia, Venezuela, Guyana, French Guiana, Ecuador, and Peru (Smith in Davidse et al., 1995).

26616078 *THELYPTERIS* (SUBG. *STEIROPTERIS*) *DECUSSATA* (L.) PROCTOR VAR. *VELUTINA* (SODIRO) A.R. SM.—**Cochabamba.** Prov. José Carrasco Torrico, 136 km antigua carretera Cochabamba-Villa Tunari, 17°06'S, 65°35'W, 1900 m, *Kessler 7286* (LPB, UC). Previously known only from Colombia and Ecuador (Smith, 1983).

26607439 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *DEFLEXA* (C. PRESL) R.M. TRYON—**Cochabamba.** Prov. José Carrasco Torrico, 111 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, 2750 m, *Kessler 6846* (LPB, UC); Prov. José Carrasco Torrico, 113 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°38'W, 2650 m, *Kessler 6935* (LPB, UC); Prov. José Carrasco Torrico, 115 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, 2500 m, *Kessler 7016* (LPB, UC); Prov. José Carrasco Torrico, 116 km antigua carretera Cochabamba-Villa Tunari, 17°08'S, 65°38'W, 2400 m, *Kessler 7035* (LPB, UC). **La Paz.** Prov. Nor Yungas, 2 km de Chuspipata a Coroico, 16°22'S, 67°49'W, 2900 m, *Kessler 11903* (LPB, UC). Previously known from s. Mexico to Panama, Colombia, Venezuela, Ecuador, and Peru (Smith, 1983; Smith in Tryon and Stolze, 1992; Smith in Davidse et al., 1995).

50163789 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *DEMISSA* A.R. SM.—**Cochabamba.** Prov. Ayopaya, 10 km Cocapata-Cotacajes, 16°38'S, 66°41'W, 2900 m, *Kessler 9366* (LPB, UC); same general locality, 3100 m, *Kessler 9534* (LPB, UC). **La Paz.** Prov. J. Bautista Saavedra M., 12 km de Charazani hacia Apolo, 15°11'S, 68°46'W, 2500 m, *Kessler 10486* (LPB, UC); Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3250 m, *Kessler 11817* (LPB, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2750 m, *Kessler 11975* (LPB, UC). Previously known only from Peru (Smith in Tryon and Stolze, 1992), from the type and one other collection.

26614922 *THELYPTERIS* (SUBG. *GONIOPTERIS*) *EGGERSII* (HIERON.) C.F. REED—**Cochabamba.** Prov. José Carrasco Torrico, 149 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1000 m, *Kessler 8038* (LPB, UC). Previously known from Costa Rica, Panama, w. Colombia, w. Ecuador, and Peru (Smith in Tryon and Stolze, 1992; Smith in Davidse et al., 1995).

26617466 *THELYPTERIS* (SUBG. *MENISCIUM*) *ENSIFORMIS* (C. CHR.) R.M. TRYON—**Cochabamba.** Prov. José Carrasco Torrico, 143 km antigua carretera Cochabamba-Villa Tunari, 17°07'S, 65°34'W, 1300 m, *Kessler 7642* (LPB, UC). **La Paz.** Prov. Caranavi, Serranía Bellavista, 42 km de Caranavi hacia Sapecho, 15°40'S, 67°29'W, 1400 m, *Kessler 11520* (LPB, UC). Previously known from Costa Rica, Colombia, w. Venezuela, Ecuador, and Peru (Smith in Tryon and Stolze, 1992; Smith in Davidse et al., 1995).

26615161 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *EXUTA* A.R. SM., VEL AFF.—**La Paz.** Prov. Caranavi, Serranía Bellavista, 36 km de Caranavi hacia Sapecho, 15°41'S, 67°30'W, 1300 m, *Kessler 11266* (LPB, UC). Previously known from two collections in Ecuador (Smith, 1983).

26609283 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *FUNCKII* (METT.) ALSTON—**La Paz.** Prov. Nor Yungas, Trocha al Valle de Coscapa, Parque Nacional Cotapata, 16°12'S, 67°53'W, 3350 m, *Kessler 11781* (LPB, UC); same general locality, 3000 m, *Kessler 11847* (LPB, UC); Prov. Nor Yungas, 5 km de Chuspipata hacia Coroico, 16°23'S, 67°48'W, 2700 m, *Kessler 12011* (LPB, UC). Previously known from Costa Rica, Colombia, Venezuela, Guyana, and Ecuador (Smith 1983; Smith in Davidse et al., 1995).

26617436 *THELYPTERIS* (SUBG. *AMAUROPELTA*) *LEPIDULA* (HIERON.) ALSTON, VEL AFF.—**Cochabamba.** Prov. José Carrasco Torrico, 109 km antigua carretera Cochabamba-Villa Tunari, 17°09'S, 65°38'W, 2950 m, *Kessler 6643B* (LPB, UC). Previously known from Costa Rica, Colombia, Venezuela (Smith in Davidse et al., 1995), and also, now, Ecuador (Prov. Carchí, Hoover et al. 3531, 3595, MO). The sole Bolivian specimen differs from others elsewhere in the range by the very shortly setulose recep-